**Amendments to the Claims**

**Listing of Claims**:

Claim 1 (canceled).

Claim 2 (currently amended). The method as claimed in ~~claim 1, wherein~~ <u>claim 17, wherein</u> the set point acceleration for individual sections is proportional to the velocity.

Claim 3 (currently amended). The method as claimed in ~~claim 1, wherein~~ <u>claim 17, wherein</u> to control the acceleration indirectly, a torque of the drive is regulated.

Claim 4 (previously presented). The method as claimed in claim 3, characterized in that a PI controller is used to control the torque.

Claim 5 (previously presented). The method as claimed in claim 3, when the torque is controlled it is kept within predefined limits.

Claim 6 (previously presented). The method as claimed in claim 3, wherein an additional torque which is proportional to the set point acceleration is added to the torque, and a proportionality constant is dependent on vehicle values.

Claim 7 (original). The method as claimed in claim 6, wherein the vehicle values are vehicle mass, a transmission ratio and/or diameter of the wheels.

Claim 8 (currently amended). The method as claimed in ~~claim 1, wherein~~ <u>claim 17,</u> <u>wherein</u> the velocity of the rail' vehicle is determined from rotational speeds of the drive and/or of an axle.

Claim 9 (currently amended). The method as claimed in ~~claim 1, wherein~~ <u>claim 17,</u> <u>wherein</u> the acceleration is determined as a first derivative of the velocity.

Claim 10-16 (canceled).

Claim 17 (new).  A method for electrodynamically braking a rail vehicle which is equipped with a drive, the method which comprises:

determining a linear function and storing the linear function as a characteristic curve representing a dependence of a negative setpoint acceleration on a velocity of the rail vehicle;

during a braking operation, repeatedly measuring the velocity and the negative acceleration of the rail vehicle;

controlling, in a closed-loop control process, the measured negative acceleration of the rail vehicle towards the setpoint acceleration taken from the characteristic curve, so as to approach the negative setpoint acceleration.